

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/806,968	KNEE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Wes Tucker	2623	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 9-3-2004.
2. ☒ The allowed claim(s) is/are 5 and 13-27.
3. ☒ The drawings filed on 06 April 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
|--|--|

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's response to the last Office Action, filed April 14, 2004 has been entered and made of record.
2. Applicant has canceled claims 1-4 and 6-12. Applicant has amended Claim 5, and added New Claims 13-27. Claims 5, and 13-27 are pending.
3. Applicant's arguments, see Amendment, filed September 3, 2004 with respect to amended claim 5 have been fully considered and are persuasive. The rejection of claim 5 has been withdrawn.

### ***Allowable Subject Matter***

Claims 5 and 13-27 are allowed.

The following is an examiner's statement of reasons for allowance:

Applicant has amended independent claim 5 to include the limitation of "estimating a signal to noise ratio of a picture signal ... and deriving said estimate by processing said quantization values and said measure of the bit rate." It is known in the art to calculate signal to noise ratios, measure bit rates, and determine quantization values. Bit rates and quantization values are also very much related in the art of compressed video signal processing. U.S. Patent 5,969,764 to Sun et al. discloses an

Art Unit: 2623

adaptive video coding system in which quantization or encoding values are determined in regard to desired bit rate (column 3, lines 40-61). Sun also discloses signal to noise ratios calculated for different video objects for different bit rates (column 12, lines 27-65). However signal to noise ratios are typically calculated by using a reference signal and determining the noise added during transmission by comparing the transmitted image signal with the original reference image signal. Applicant claims the inventive element that a signal to noise ratio estimate is derived by using a measure of the bit rate of the compressed bit stream and a determined quantization value. None of the prior art teaches or fairly suggests estimating a signal to noise estimate in this way.

U.S. Patent 6,810,083 to Chen et al. discloses a system for estimating objective quality of compressed video data without access to the source data. This is known as a single-ended system and is the same environment as Applicant's claimed invention. Chen discloses that a peak signal to noise ratio is calculated based on a determined quantization error. Chen however does not disclose measuring a bit rate to be used in deriving the signal to noise ratio calculation. Also U.S. Patent 6,810,083 to Chen et al. has priority to a date of November 16<sup>th</sup>, 2001. Applicant claims priority to a date of October 9<sup>th</sup>, 1998 as well as a PCT data of October 11<sup>th</sup> 1999.

Claims 13-22 are dependent on claim 5 and are therefore also allowable.

Claim 23 is allowable for at least the same reasons discussed in regard to claim 5 and claims 24-27 depend on claim 23 and are therefore also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 703-305-6700. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/806,968  
Art Unit: 2623

Page 5

Wes Tucker

1-10-04

  
Jon Chang  
Primary Examiner